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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-----------------|----------------------|---------------------|------------------|
| 09/720,045 | 12/18/2000 | Jacques Bauer | GEI-084 | 6820 |
| 20311 | 7590 12/15/2003 | | EXAMINER | |
| MUSERLIAN AND LUCAS AND MERCANTI, LLP 475 PARK AVENUE SOUTH | | | RUSSEL, JEFFREY E | |
| NEW YORK, | · | | ART UNIT | PAPER NUMBER |
| | | | 1654 | |

DATE MAILED: 12/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| | Application No. | Applicant(s) | | | |
|---|--|--|--|--|--|
| Office Action Summany | 09/720,045 | BAUER ET AL. | | | |
| Office Action Summary | Examiner | Art Unit | | | |
| | Jeffrey E. Russel | 1654 | | | |
| The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply | | | | | |
| A SHORTENED STATUTORY PERIOD FOR REPLY THE MAILING DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication. - If the period for reply specified above is less than thirty (30) days, a reply - If NO period for reply is specified above, the maximum statutory period w - Failure to reply within the set or extended period for reply will, by statute, - Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b). Status | 6(a). In no event, however, may a reply be tim within the statutory minimum of thirty (30) days ill apply and will expire SIX (6) MONTHS from cause the application to become ABANDONE | rely filed s will be considered timely. the mailing date of this communication. O (35 U S C § 133) | | | |
| 1) Responsive to communication(s) filed on <u>27 February 2001 and 28 March 2003</u> . | | | | | |
| 2a) ☐ This action is FINAL . 2b) ☑ This a | action is non-final. | | | | |
| 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213. | | | | | |
| Disposition of Claims | | | | | |
| 4) Claim(s) 4-8 and 16-31 is/are pending in the application. 4a) Of the above claim(s) is/are withdrawn from consideration. 5) Claim(s) is/are allowed. 6) Claim(s) 4-8 and 16-31 is/are rejected. 7) Claim(s) is/are objected to. Claim(s) are subject to restriction and/or election requirement. | | | | | |
| Application Papers | | | | | |
| 9)☑ The specification is objected to by the Examiner 10)☑ The drawing(s) filed on 18 December 2000 is/ar Applicant may not request that any objection to the d Replacement drawing sheet(s) including the correction 11)☐ The oath or declaration is objected to by the Examiner | e: a) ☐ accepted or b) ☒ objected or b) ☒ objected in abeyance. See on is required if the drawing(s) is object. | 37 CFR 1.85(a). ected to. See 37 CFR 1.121(d). | | | |
| Priority under 35 U.S.C. §§ 119 and 120 | | | | | |
| 12) Acknowledgment is made of a claim for foreign a) All b) Some * c) None of: 1. Certified copies of the priority documents 2. Certified copies of the priority documents 3. Copies of the certified copies of the priority application from the International Bureau * See the attached detailed Office action for a list of the priority application from the International Bureau * See the attached detailed Office action for a list of the priority application from the International Bureau * See the attached detailed Office action for domestic since a specific reference was included in the first | have been received. have been received in Application ty documents have been received (PCT Rule 17.2(a)). of the certified copies not received priority under 35 U.S.C. § 119(e) | on No d in this National Stage d.) (to a provisional application) | | | |

Attachment(s) 1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152) 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6) Other: U.S. Patent and Trademark Office PTOL-326 (Rev. 11-03) Office Action Summary Part of Paper No. 1203

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) The translation of the foreign language provisional application has been received.

37 CFR 1.78.

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1. This application contains sequence disclosures that are encompassed by the definitions for nucleotide and/or amino acid sequences set forth in 37 CFR 1.821(a)(1) and (a)(2). However, this application fails to comply with the requirements of 37 CFR 1.821 through 1.825 for the following reasons:

The Sequence Listing filed March 28, 2003 was not accompanied by a statement that the sequence listing includes no new matter. See 37 CFR 1.821(g).

Correction is required.

The Sequence Listing filed March 28, 2003 was approved by STIC for matters of form.

- 2. The abstract of the disclosure is objected to because it is insufficiently detailed as to the specific pharmacological uses of the claimed compounds. The abstract should also be in the form of a single paragraph. Correction is required. See MPEP § 608.01(b).
- 3. The disclosure is objected to because of the following informalities: There is no Brief Description of the Drawings as required by 37 CFR 1.74. Appropriate correction is required.
- 4. The drawings are objected to because in the heading to Figure 5, "effect" is misspelled, and in Figure 10, the text of the heading is repeated. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
- Two preliminary amendments were filed in this application, each containing a new claim 20. In the preliminary amendment filed December 18, 2000, the claim which is numbered "20" ("A method of modulating immune responses…") will retain its claim number. In the preliminary amendment filed February 27, 2001, the new claims which were numbered "20" through "30" have been re-numbered as "21" through "31", respectively, under 37 CFR 1.126.

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Any future reference to these claims will use their re-numbered claim numbers. In the response to this Office action, Applicants are required to re-number these claims in the Amendment section of their response consistent with the above renumbering, and are required to correct the dependencies of claims 4-8 and 22-31 consistent with the above renumbering.

Claims 4-8 and 16-31 are rejected under 35 U.S.C. 112, second paragraph, as being 6. indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 4-8 refer to "the compound of claim [21]". However, claim 21 is drawn to a N-acyl-dipeptide and nowhere uses the term "compound". Claim terminology needs to be standardized in order to avoid issues concerning antecedent basis. Claims 22-26 and 31 raise the same issues with respect to antecedent basis and claim terminology. Claim 4 is indefinite because the "and/or" language is improper Markush language. Further, possibly because of formatting, it is unclear what relationship the various substituents and numbers, especially the "10-diol", the "1", and the "10-dihydrogenphosphate", have with each other. Claims 16 and 20 are dependent upon canceled claim 1. Claim 21, line 13, uses the variable n1 in the structural formula, but defines the variable n'. Claim terminology needs to be standardized. At claim 21, line 16, "and" should be inserted after "sulfonyl," so that standard Markush terminology is used. Claim 25, lines 1-9, recites process steps by which a compound of the formula recited at line 10 is to be obtained. However, none of the groups present in the reactants of lines 1-9, especially the (CH₂)_p, the (CH₂)_{q+1}, and the R₂ groups, are present in the compound of line 10. It is believed that the wrong formula has been inserted at line 10. Claim 25 is indefinite because it requires reaction "with a ω-hydroxy, amino or thioamino acid of Formula III"; however, Formula III is not recited or defined in the claim.

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Claim 26, formulas (III) and (IV), are incorrect because each has an internal carbon atom which shows only two filled valences. It is not clear what is attached to the other two valences. In claim 26, the reaction of compounds of formulas (II) and (III) to form the compound of formula (IV) appears to be incorrect, because the compound of formula (IV) shows the presence of (RO)₂-P and R₁ groups which are not present in any of the claimed reactants used to produce the compound of formula (IV). Claim 26 is indefinite because the variable "R" used in formula (IV) is not defined in the claim. Claims 29 and 30 refer to "The method of claim 25"; however, claim 25 is drawn to a process, not a method. Claim terminology needs to be standardized.

Claims 4, 6, 21, 22, and 24-31 are objected to because of the following informalities:

The preliminary amendment to claim 4 filed February 27, 2001 deleted the beginning parenthesis from line 1. Accordingly, the end parenthesis after "dodecanoyloxytetradecanoylamino" in line 2 is unmatched. At claim 6, line 2, "dodecanoyloxytetradecanoylamino" is misspelled. At claim 21, line 6, "alkyl" is misspelled. At claim 21, page 2 of the preliminary amendment, line 7, "phosphono" is misspelled. At claim 26, line 2, a verb, probably "blocking", is missing from after "comprising". At claim 26, line 5, "the latter" appears to refer to the blocking agent rather than to the COOH group of the formula at line 4. Analogously, the phrase "the latter" at line 8 does not appear to refer to the correct compound. At claim 26, line 6, "COOH" is misspelled. Applicants' use of the q+1 and q subscripts in claim 26 appears to be incorrect. In the formula at line 4, there are q+1 CH₂ groups. When this is combined with the CH₂ group which results from reducing the free COOH group, there will be q+2, not q, CH₂ groups. It is possible that Applicants intended "q-1" rather than "q+1". This subscript should also be checked in claim 25. At claim 26, fifth-to-last line, "agent" is misspelled. At claim 29, line 2, "tetradecanoic" is

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misspelled. At claim 30, line 2, "hydroxytetradecanoic" is misspelled. Appropriate correction is required.

- 8. Claims 4-8 and 16-31 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, and the claim objections set forth in this Office action. The prior art of record does not teach or suggest compounds having the structures recited in instant claims 16 and 21. Accordingly, methods of making, methods of using, and pharmaceutical compositions comprising the compounds are also novel and unobvious over the prior art of record.
- 9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey E. Russel at telephone number (703) 308-3975. The examiner can normally be reached on Monday-Thursday from 8:30 A.M. to 6:00 P.M. The examiner can also be reached on alternate Fridays.

PLEASE NOTE: Sometime on or around January 6, 2004, the examiner will be moving to the new USPTO headquarters. At that time, the examiner's phone number will change to (571) 272-0969. After January 6, it is recommended that Applicants attempt to contact the examiner at the new phone number if they are unable to reach him using the old number.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Brenda Brumback can be reached at (703) 306-3220. The fax number for Technology Center 1600 for formal communications is (703) 872-9306; for informal communications such as proposed amendments, the fax number (703) 746-5175 can be used. The telephone number for the Technology Center 1600 receptionist is (703) 308-0196.

Jeffrey E. Russel Primary Patent Examiner Art Unit 1654

JRussel December 10, 2003